metabolism. In cases in which vegetables are used to turn the urine alkaline, vegetables must be used in which the amount of protein is smaller in proportion to the salts, like fruits, rice, wheat and the like, rather than those in which a large amount of protein is present, such as peas, beans and the like. Vegetables which contain purins like coffee, tea and cocoa may increase the acidity, because they may produce uric acid. In cases of infection, especially of the urinary tract, and in cases of starvation, the urine tends to become more acid than in other conditions; therefore it is more difficult to render it alkaline. When drugs are used without the proper diet, the dose necessary to make the urine alkaline is much larger than is usual. The action of the drugs is very fleeting, and should be watched and given in larger and more frequent doses as necessary.

OBSTETRICS

UNDER THE CHARGE OF

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The Lower Uterine Segment.—In a discussion before the Royal Academy of Medicine in Ireland, TWEEDY (*Jour. Obst. and Gynec. Brit. Emp.*, June–August, 1915) stated that there is now sufficient data to clear up the mystery of the anatomy of this part of the womb and the endoperitoneal tissue is the true boundary between the cervix and body, and constitutes the tendinous extremities of the uterine fibers. Until this tissue has been made inert by rupture or by opening of the internal os, no direct pressure can be brought to bear on the cervix. In fact, dilatation of the internal os is an early phenomenon in pregnancy which permits the ovum to pass through and press directly on the cervix. A continuous pressure causes a rapid hypertrophy in the cervix which does not stretch but grows.

Intestinal Hemorrhage in the Newborn.—CRAWFORD (*Jour. Obst. and Gynec. Brit. Emp.*, June–August, 1915) describes 2 cases of intestinal hemorrhage in female infants, the bleeding appearing thirty-six and fifty-two hours after birth. The labors had been normal. In the first case horse serum was given subcutaneously in three doses of 2 c.c., and with each a small dose of adrenalin. This infant died on the fifth day and a duodenal ulcer was found very near the pylorus. The second case was treated by antidiphtheric serum, two doses of 5 c.c. each, followed by recovery. Breast-feeding was resumed without difficulty on the fifth day. The only symptom in both cases was free hemorrhage from the rectum and vomiting was absent. In discussion a case was described of an infant three days old that died three hours after having nose-bleeding.

Gunshot Wounds of the Body During Pregnancy.—Smead (*Am. Jour. Obst.*, December, 1916) describes the case of a patient, aged twenty-five years, pregnant, at term, who was accidentally shot in the back. The bullet entered about one inch below the twelfth rib on the right side at the outer edge of the quadratus lumborum and could be felt lying under the skin of the abdomen about two inches below the heart and to the right of the umbilicus. The patient was poorly nourished, heart and lungs normal, and urine free from albumin. There was no elevation of temperature on admission. The abdomen was hard, tense, very sensitive and slightly distended. A small quantity of blood was escaping from the wound in the back. The child's heart was strong and nearly normal in rate. Upon opening the abdomen, the peritoneal cavity contained a large quantity of free blood and coagula with which amniotic liquid was mixed. There was a perforation of the posterior wall of the uterus to the right of the midline about three inches below the fundus, and a second was present on the anterior wall about two inches below the fundus. Between the two openings the course of the bullet was about five inches. The size of the uterus made it impossible to properly explore the abdomen for intestinal perforations, and, accordingly, Cesarean section was immediately done. The placenta had been perforated by the bullet. The child was readily delivered and cried immediately. Its only injury was that the ring finger on the left hand had been broken and lacerated by the bullet. The uterus contracted normally. The uterine incision and the bullet wound were closed with chromic catgut. When the blood was sponged out of the abdomen the intestines were examined for perforations. The bullet had entered between the folds of the mesentery of the ascending colon and passed through the bowel, making two perforations. It had then gone through the uterus and into the abdominal wall without injuring the small intestine or any other organs. The perforations in the colon were closed and a drain was passed down to that on the posterior surface of the bowel. The abdomen was drained by three soft tubes; the mother made an uninterrupted recovery. The child was nursed and developed normally. The broken finger was pieced together and healed by first intention, although there was a very slight deformity. The writer has collected 29 cases, showing a surprisingly low mortality if operation is promptly performed. In discussion, Davis reported a case of a woman, pregnant three and a half months, accidentally shot by a small rifle, the bullet making twenty-one perforations in the abdominal organs. She was brought by train 85 miles to hospital and was seen twelve hours after the receipt of the injury. Five feet of intestine were removed, including nineteen perforations. The patient recovered and was delivered of a living child at the ninth month.

Pelvic Infections in Pregnancy.—Moore (*Am. Jour. Obs.*, November, 1916) describes a peculiar type of pelvic infection complicating pregnacy. His patient was a rachitis negress who was delivered by Cesarean section of a living, full-term child and suffered from puerperal neuritis while in the hospital. This appeared in both arms, in the posterior tibial muscles and fingers. The patient again came into the hospital and was delivered spontaneously of a premature child which did not long survive. The patient was ill-nourished, with slightly

enlarged thyroids, and stated that there had probably been a premature rupture of the membranes and hemorrhage before she entered the hospital. Two hours after her delivery the patient had a severe chill, the temperature rising to 105° F. At three o'clock the next morning she had another chill, temperature rising to 104° F., after which it gradually declined to normal during the next twenty-four hours. The blood showed a pure growth of Staphylococcus aureus. The leukocytes were 11,200. On the seventh day after delivery the blood was negative but lochial discharge showed many colonies of Staphylococcus aureus. The patient had tenderness over the entire tibial muscles which appeared to be neuritis of a mild type. The lochia was not foul and the patient felt well during her illness.

Dermoid Cyst of the Ovary with Twisted Pedicle and Acute Appendicitis Complicating Pregnancy.—DOYLE (*Am. Jour. Obst.*, November, 1916) reports the case of a primipara who had had abdominal pain at various periods of her life before marriage. Menstruation had ceased about four and a half months previously. The patient then had an attack of sharp, sudden pain in the right lower abdomen with vomiting and prostration. This lasted three days. One week later the pain again appeared on the right side and was more severe. To the right of McBurney's point and lower there was a mass of considerable size, very tender and painful. Vaginal examination was unsatisfactory. At operation an ovarian tumor was found, with two twists in its pedicle, and behind it an acutely inflamed appendix, adherent to the posterior wall of the pelvis. Both tumor and appendix were removed, the patient making an uninterrupted recovery. Pregnancy was not disturbed, and the patient ultimately gave birth to a healthy, normal child. The tumor was a dermoid filled with sebaceous material, and contained six teeth and some hair.

Myomectomy in Pregnancy.—ALFIERI (*Anal. di Ostetr*, No. 8, 1916) reviews the literature of the subject and believes that in performing myomectomy during pregnancy the operator must be sure that the substance of the uterus is not essentially damaged and that the uterus is left in such a condition as to safely perform the function of parturition. While it is desirable to practice conservatism, this must not be carried to the extent of retaining a tumor whose presence might seriously complicate labor.

Management of Tumors Complicating Pregnancy, Labor and the Puerperal State.—BEACH (*Am. Jour. Obst.*, June, 1916) believes that it is of the utmost importance that the presence of ovarian tumor complicating pregnancy be early diagnosticated. The smaller the tumor the more apt it is to have torsion of the pedicle followed by gangrene. The occurrence of some acute intra-abdominal calamity during pregnancy should always suggest the possibility of a small ovarian tumor which has undergone torsion. Rupture and suppuration of such tumors may occur. As regards treatment, statistics abundantly show that operation is far safer than the expectant method. When tumors are discovered during the first half of pregnancy, unquestionably the safest

method of treatment is removal. The abdominal operation is far safer than the vaginal. When ovarian tumors are discovered during the second half of pregnancy, if the patient is at term, Cesarean section should precede or follow removal of the tumor. The writer describes the case of a girl, aged eighteen years, in her second labor, in whom it was thought there was an ovarian cyst behind the uterus complicating labor. The child was living and uterus showing high retraction ring. An attempt to replace the tumor under anesthesia failed. Upon opening the abdomen the lower segment was greatly thinned and the pedicle of a right-sided ovarian tumor passed down posteriorly behind the head into the pelvis. The tumor could be felt along the side of the head. An attempt was made to draw the tumor out of the pelvis while an assistant pushed the head up from below. This was unsuccessful and the pedicle of the tumor began to tear. With considerable difficulty a trocar was inserted into the tumor and a small quantity of mucilaginous substance was discharged. The operator then made traction on the head upward by the hand in the abdomen while an assistant made pressure on the tumor from below. This was successful. The head was then pressed down and delivered by forceps from below, followed by removal of the tumor through the abdomen. The placenta was expressed by the hand within the abdomen and the abdomen closed. Both mother and child made a good recovery. In cases of ovarian tumor complicating pregnancy and labor in which the tumor is adherent, infected or broad ligament tumor or when there is any grade of pelvic contraction, Cesarean section is the operation of choice. The tumor is dealt with after the removal of the child. In infected cases which develop late in labor, abdominal section should be at once performed. In cases in which the presence of the tumor is first discovered during the puerperal period, operation still remains the safest method of procedure.

Induction of Labor in Normal Pelvis at Term.—Reed (*Surg., Gynec., and Obst.*, March, 1916) argues that because the physiological duration of human pregnancy is not exactly known, and the factors that determine the onset of labor are exceedingly obscure, that one should not allow the mother to delay in pregnancy after full term has been reached. The dangers of prolonged pregnancy are overgrowth of the child, injury to mother and child, with chance of death of the fetus and considerable risk for the mother. He takes the length of the fetus as normally 50 cm. and the weight between 5 and 8 pounds. He measures the length of the child *in utero*, using a pelvimeter from the upper border of the symphysis to the breech of the child. This measurement is doubled and 2 cm. subtracted for the thickness of the abdominal wall. The result of this calculation should give the length of the child. In his cases this measurement had rarely varied more than 2 cm. from the actual length of the child obtained at birth. Müller's method of crowding the head into the pelvis may also be used to ascertain the comparative size of the pelvis and fetus. These measurements are also correct by a careful computation of the length of pregnancy taken from the menstrual history. The induction of labor is brought about after antiseptic precautions by introducing a Voorhees bag without rupture of the membranes. The bag is introduced and moderately distended, and if pains do not start

within a hour then a weight of 1 or 2 pounds is attached by a tape to the protruding tape and passed over the foot of the bed. Usually in from five minutes to half an hour contractions begin and generally go on to spontaneous expulsion. Two objections are against this procedure: One, the possibility of infection, second, the fact that a mistake in calculation may be made and the child delivered before it is thoroughly viable. Again, the dilating bag may break; 100 consecutive cases were treated in this way, 35 primiparæ and 65 multiparæ. The average duration of labor was seven hours and forty-five minutes; the shortest labor fifty-five minutes; the longest thirty hours. During, or shortly after, the insertion the bag broke six times and was reinserted three times. The average time for the expulsion of the bag was three hours and twenty minutes. The membranes were ruptured by the introduction of the bag twice. There were two maternal deaths: 1 from placenta previa with myocarditis and 1 from pneumonia eight days after labor. The average weight of the child was 7 pounds 7 ounces; the smallest 5 pounds; the heaviest 10 pounds 5 ounces. Seven children died. There were 3 cases of version and extraction; 17 cases of laceration of the perineum; forceps was used in 23 cases. In 7 patients there was postpartum rise of temperature. In but 1 case, however, was there tenderness over or beside the uterus or foul discharge or subinvolution. In only 1 case was it necessary to use the catheter after delivery. While this proposition seems attractive it cannot be endorsed by conservative obstetricians. The dilating bag often causes severe suffering, while the risk to the mother and child are greater than in spontaneous labor. This procedure disregards the natural preparation of the child for labor by its descent into the pelvic cavity. A much better criterion than the attempted measurement of the child *in utero* consists in watching the development of pregnancy, and, in primiparæ, studying the descent of the child's head into the pelvic cavity. When the patient comes to term, and this does not occur, there is some abnormality which may require the bringing on of labor. In multiparæ it is best to calculate, as accurately as possible, the period of pregnancy, and the former experience of the patient is always available for the guidance of the physician.

Cesarean Section for Placenta Previa.—Krönig (*Deutsch. med. Wchnschr.*, 1916, 1178, xlii), reasoning on the accepted clinical principle that not only the mother but the child must be saved, believes that version and the use of the dilating bag cannot be considered satisfactory in placenta previa. Both are exceedingly dangerous to mother and child. When the ovum is of low attachment the wall of the lower segment is infiltrated with fetal cells which sometimes cause rupture. The stretched condition of this portion of the uterus renders such operations as vaginal Cesarean section, version or dilatation, with instruments or a bag, very undesirable. When a patient with placenta previa has fever and has been tamponed on account of severe hemorrhage it may be difficult to determine just which method of Cesarean section should be chosen. Section through the body of the uterus is contra-indicated if the os is larger than a silver dollar.